## LOS ANGELES COUNTY

**Site name:** Abalone Cove State Marine Park

**Year established:** 1977
**Approximate Area:** 0.09 $nm^2$ **Approximate Shoreline length:** 1.01 nm
**Approximate Depth range (feet):** 0 to 30

**Habitat types:** Rocky outcrops, otherwise sand in the subtidal zone. Western shoreline is rocky with sand/cobble to the east.

**Surrounding habitat types:** Rocky points with kelp forest and reef habitat. Sandy coves and soft bottom areas offshore.

**Summary of existing regulations:** Take of all living marine resources is prohibited except the recreational take of finfish by hook and line or spear.

**Primary objectives:** This area was originally designated as an ecological reserve. Fish and Game Code Section 1580 (ecological reserves) states that "the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves." Although the language does not specifically refer to ecological reserves in marine areas, the Fish and Game Commission has extended this policy to those areas. A specific purpose of the Abalone Cove Ecological Reserve was to allow recreational take of finfish while protecting other biological and geological resources.

**Existing Enforcement:** Included as part of normal Department of Fish and Game marine patrol activities for this general area based on available patrol resources and level of fishery activity in the area. Local park staff may provide added enforcement presence.

**Baseline and ongoing monitoring and research studies:** Miller and Lawrenze-Miller included this site in black abalone surveys of the Palos Verdes Peninsula.

**Basic Evaluation:** Provides limited protection to selected resources in an area currently subject to disturbance from terrestrial runoff, siltation and human use. Kelp restoration efforts at this area in the 1970s provided a source of recruitment for kelp recovery over much of the Palos Verdes Peninsula as water quality and habitat conditions improved. Red abalone recovered to relatively high numbers in this site during the 1980s as a result of successful natural recruitment, but declined severely by 1990 as habitat conditions deteriorated.

**Published references related to use of this MPA as a research tool:** 119
**Unpublished references related to use of this MPA as a research tool:** 68

**Site name:** Pt. Fermin State Marine Park

**Year established:** 1969
**Approximate Area:** 0.06 $nm^2$ **Approximate Shoreline length:** 0.47 nm
**Approximate Depth range (feet):** 0 to 60 (estimated)

**Habitat types:** Complex, diverse habitats including rocky shore; kelp beds; surf grass beds; boulder and bedrock occur throughout this site.

**Surrounding habitat types:** Kelp forest and rocky reefs to the west and nearby offshore, soft bottom habitat to the east.

**Summary of existing regulations:** Take of all living marine resources is prohibited except the recreational take of: lobster, rockfish (family Scorpaenidae), greenling, lingcod, cabezon, yellowtail, mackerel, bluefin tuna, kelp bass, spotted sand bass, barred sand bass, sargo, croaker, queenfish, corbina, white seabass, opaleye, halfmoon, surfperch (family Embiotocidae), blacksmith, barracuda, sheephead, bonito, California halibut, sole, turbot, and sanddab.

**Primary objectives:** This area was originally designated as a marine life refuge. Although no specific objectives were provided for the marine life refuge designation, Fish and Game Code Section 10500 states that "Except under specific permit or authorization, it is unlawful: (f) To take or possess any invertebrate or specimen of marine plant life in a marine life refuge." In addition, individual marine life refuges may have been established for a variety of site specific of purposes. A specific purpose for the Point Fermin marine life refuge was to protect the rocky intertidal invertebrate and plant assemblages primarily for educational and aesthetic values.

**Existing Enforcement:** Included as part of normal Department of Fish and Game marine patrol activities for this general area based on available patrol resources and level of fishery activity in the area. Local park staff, lifeguards and Cabrillo Aquarium staff who conduct educational and interpretive programs in the area may provide added enforcement presence.

**Baseline and ongoing monitoring and research studies:**
Rich Ambrose (UCLA) has established intertidal monitoring of intertidal plants and invertebrates. Historic algae surveys were performed in 1957-59 by E. Yale Dawson and were repeated in the late 1960s by T. Widdowson and in the 1970s and early 1980s by Ronald Thom and Leslie Harris. Amanda Gerrard and Steve Murray resurveyed Dawson=s transects at Point Fermin during spring 1999.

**Basic Evaluation:** Provides protection to most invertebrates, plants and some fishes. This is an easily accessible MPA for a large urban population and is adjacent to Cabrillo Marine Museum which conducts public education programs in the site. It would be a good site for future research and baseline monitoring. The MPA comprises diverse intertidal and subtidal assemblages and habitats that are valuable as an educational tool for the greater Los Angeles public. Area inside and outside the MPA is diverse, with kelp beds, sulfur pools and good rock habitats to the west.

**Published references related to use of this MPA as a research tool:** 38, 39, 189, 128, 208

**Site name:** Catalina Marine Science Center State Marine Reserve

**Year established:** 1988
**Approximate Area:** 0.06 $nm^2$ **Approximate Shoreline length:** 1.08 nm
**Approximate Depth range (feet):** 0 to 120

**Habitat types:** Overall this site has about 50% hard and 50% soft substrates. Southwest of the pier is a soft-bottom cove with approximately 20 moorings for large boats. Southeast is a small soft-bottom cove. Within the small cove there are approximately 8 moorings for small research craft. Further southeast are rocky walls and hard bottom (to 30 m) and deeper soft bottom (to 100 m). The hard bottom habitat supports kelp forests.

**Surrounding habitat types:** Rocky shoreline, kelp forest and reefs adjacent to site. Some soft bottom areas offshore and in nearby coves. Extensive reef systems in nearby general area.

**Summary of existing regulations:** No take is allowed. No anchoring except in emergencies or as permitted by federal law.

**Primary objectives:** This area was originally designated as a marine life refuge. Although no specific objectives were provided for the marine life refuge designation, Fish and Game Code Section 10500 states that "Except under specific permit or authorization, it is unlawful: (f) To take or possess any invertebrate or specimen of marine plant life in a marine life refuge." In addition, individual marine life refuges may have been established for a variety of site specific purposes. A specific purpose for the Catalina Marine Science Center marine life refuge was to provide an area completely protected from take or other human disturbances for research activities associated with the adjacent marine science center.

**Existing Enforcement:** Included as part of normal Department of Fish and Game marine patrol activities for this general area based on available patrol resources and level of fishery activity in the area. Local harbor patrol, lifeguards and employees and researchers from the Marine Science Center provide an added enforcement presence. There are signs and buoys to mark the area as well.

**Baseline and ongoing monitoring and research studies:** There have been numerous studies by scientific, volunteer and student researchers. The Catalina Conservancy Divers have long-term studies, especially for giant kelp. Published and gray literature in the Southern California Academy of Sciences Bulletin. Dr. Jack Engle of UCSB has conducted roving diver fish surveys during the last 3 or 4 years and is working with others to monitor rocky intertidal populations at Bird Rock. Mark Littler and Steve Murray established a site near Fisherman Cove as part of the BLM-sponsored studies in the mid-1970s. Steve Murray of CSU Fullerton has recently re-assessed the distributions and abundances of rocky intertidal populations to examine decadal scale changes in intertidal systems.

**Basic Evaluation:** Provides complete protection to all marine life in a semi-sheltered island habitat in the warm water region of the southern Channel Islands. It was established as a research site under control of the adjacent Wrigley Institute for Environmental Studies (WIES). WIES has become a popular educational and outreach center. It now subsidizes graduate student work and continues to support university researchers. The no-take MPA is vital to those operations. In addition, this site has strong research and monitoring potential to assess the effectiveness of no-take MPAs on resources since surrounding areas receive heavy recreational fishing pressure. Kelp bass and sheephead were

found in higher densities and larger sizes in this MPA compared with nearby areas open to harvest indicating that this MPA is protecting these desirable species to a greater extent than general fishery regulations elsewhere.

**Published references related to use of this MPA as a research tool:** 116, 122, 123, 124, 125, 126

**Site name:** Farnsworth Bank State Marine Conservation Area

**Year established:** 1972
**Approximate Area:** 0.06 $nm^2$ **Approximate Shoreline length:** not available
**Approximate Depth range (feet):** 50 to 300

**Habitat types:** Rocky pinnacle, high relief with extensive colonies of purple hydrocoral.

**Surrounding habitat types:** Continuation of high relief pinnacle and reef habitat, boulder and reef debris in deeper areas with some sandy areas as well. Catalina Submarine Canyon nearby to the northwest.

**Summary of existing regulations:** Take of purple coral (*Stylaster californicus*) is prohibited. Take of other living marine resources is allowed.

**Primary objectives:** This area was originally designated as an ecological reserve. Fish and Game Code Section 1580 (ecological reserves) states that "the policy of the state is to protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves." Although the language does not specifically refer to ecological reserves in marine areas, the Fish and Game Commission has extended this policy to those areas. A specific purpose of the Farnsworth Bank State Marine Conservation Area is to protect dense populations of the hydrocoral, *Stylaster californicus*, and high relief pinnacles.

**Existing Enforcement:** Included as part of normal Department of Fish and Game marine patrol activities for this general area based on available patrol resources and level of fishery activity in the area.

**Baseline and ongoing monitoring and research studies:** Area of Special Biological Significance 1981 Report by SWRCB. 1972 bathymetric and biological survey by Mary Bergen. Submarine and ROV surveys for abalone conducted by the Department.

**Basic Evaluation:** Provides some protection to purple coral and marine plants in a portion of a unique high relief pinnacle habitat in the warm water region of the southern Channel Islands. Has potential as a site for white abalone restoration efforts.

**Site name:** Lover=s Cove State Marine Conservation Area

**Year established:** 1974
**Approximate Area:** 0.02 $nm^2$ **Approximate Shoreline length:** 0.30 nm
**Approximate Depth range (feet):** 0 to 105

**Habitat types:** Composed of approximately 80% hard bottom. Giant kelp in shallow water.

**Surrounding habitat types:** Rocky and pebble shoreline adjacent to site. Sandy/soft bottom offshore.

**Summary of existing regulations:** Take of all living marine resources is prohibited except the commercial take of finfish and kelp.

**Primary objectives:** Although some harvest is officially allowed, all harvest and diving is unofficially prohibited by local authority. This small MPA adjacent to Avalon Cove is frequently used as a tourist destination for glass bottom boats, especially in the summer.

**Existing Enforcement:** Included as part of normal Department of Fish and Game marine patrol activities for this general area based on available patrol resources and level of fishery activity in the area. Local harbor patrol, lifeguards and tour operators provide an added enforcement presence.

**Baseline and ongoing monitoring and research studies:** Surveyed by Dr. Milton Love's group.

**Basic Evaluation:** Provides de facto complete protection of all marine life. Heavily used as a tourist site for viewing relatively undisturbed and abundant nearshore reef marine life as a result of the high level of protection and observation. Kelp bass were at the same densities as areas outside this MPA but total biomass was several times greater (larger individual sizes) inside indicating that this MPA is protecting this desirable species to a greater extent than general fishery regulations elsewhere.

**Published references related to effectiveness of this MPA:** 3